



# ENERGY STAR Update

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ENERGY STAR Product Labeling  
Climate Protection Partnership Program

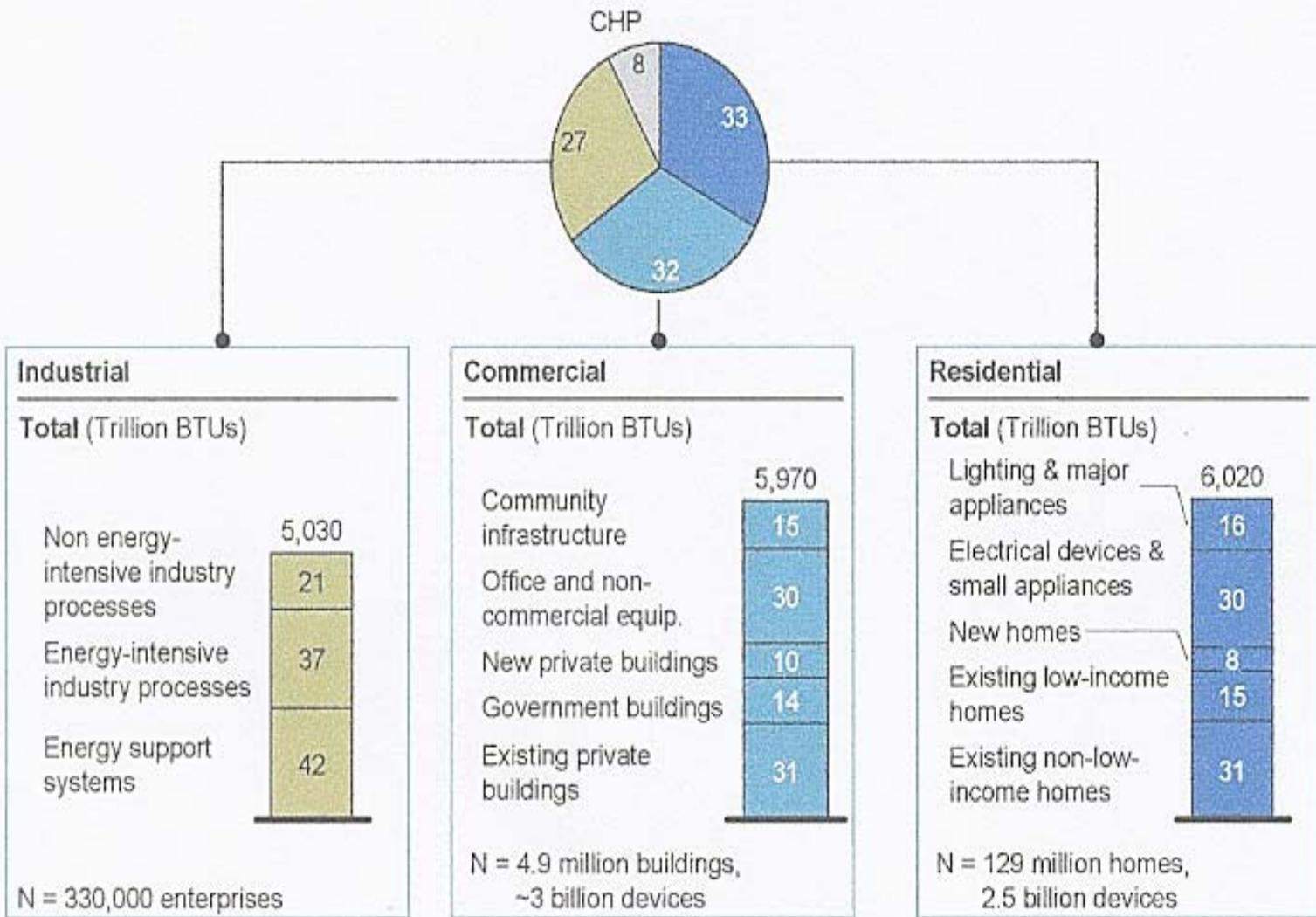
U.S. EPA

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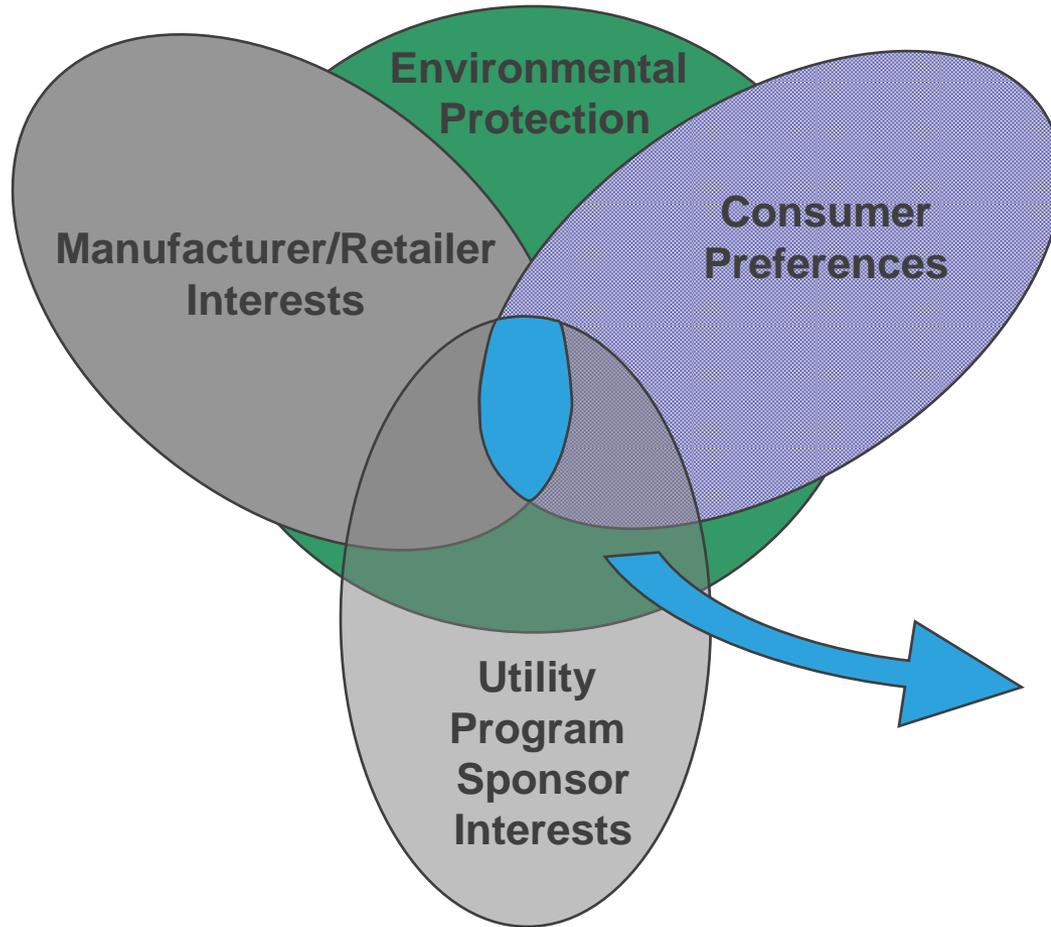
Learn more at [energystar.gov](http://energystar.gov)

# Energy Efficiency Opportunities



Source: EIA AEO 2008, McKinsey analysis

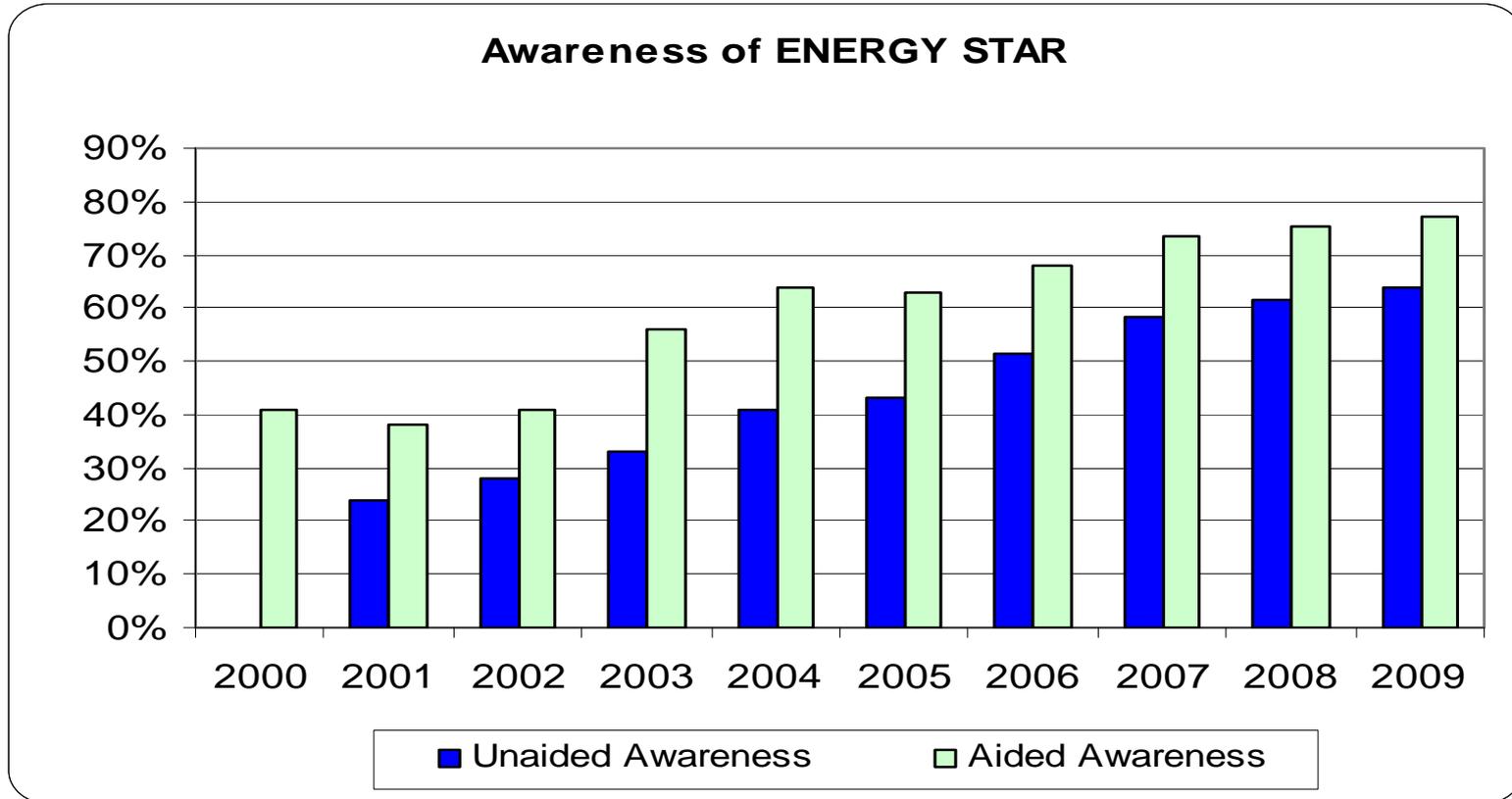
# ENERGY STAR Builds on Intersection of Interests



- Cost-effective
- No Sacrifice in Performance

Consumer is Key

# ENERGY STAR Awareness



**More than 75% awareness; ~80% influence and loyalty (likeliness to recommend) among purchasers**

# ENERGY STAR Successes



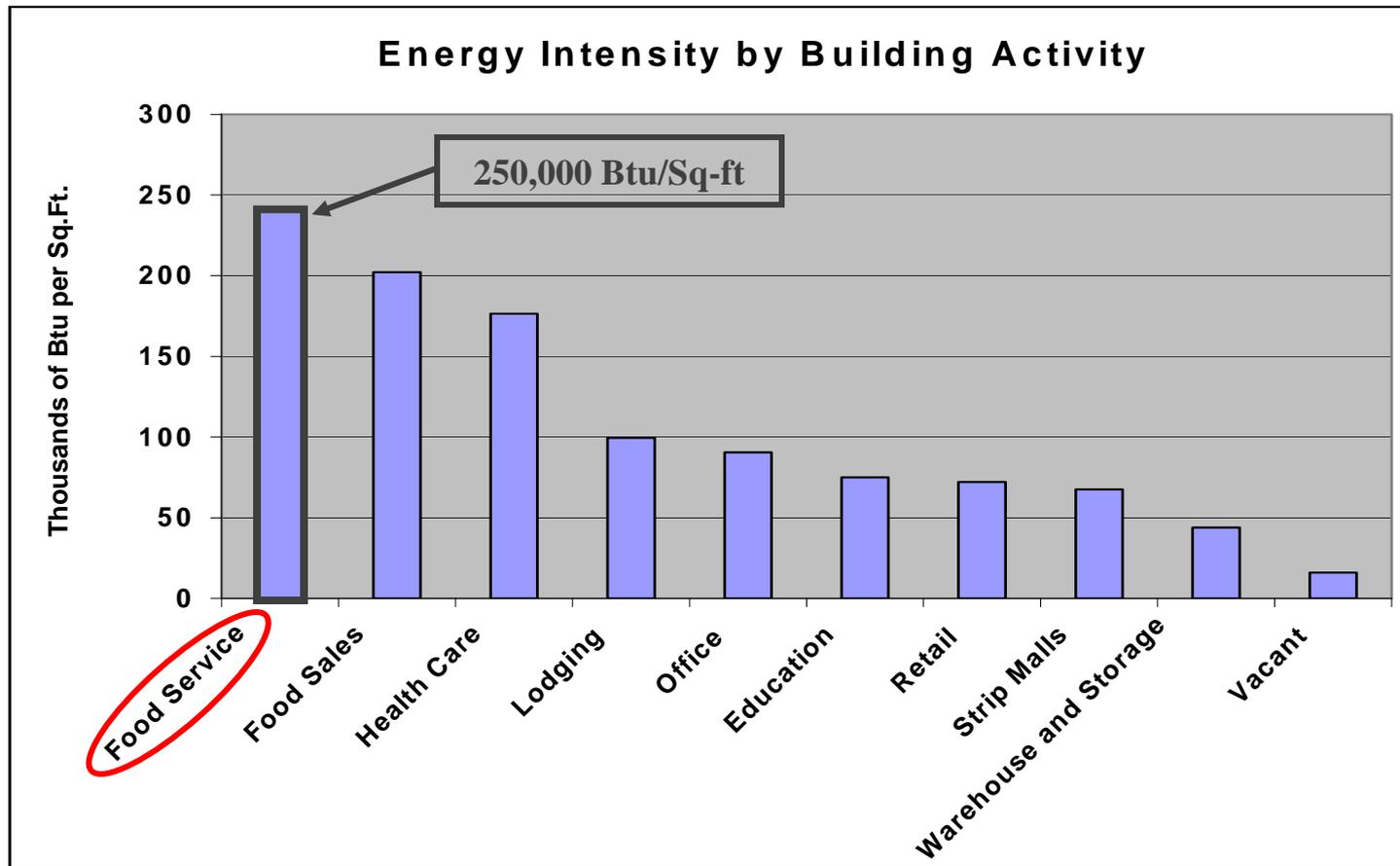
In 2009 alone, Americans:

- saved **\$17 billion dollars** off energy bills with **ENERGY STAR**
- saved **45 MMTCe**, equivalent to the annual emissions of 30 million cars
- purchased over **300 million ENERGY STAR** qualified products

# Why CFS is important to ENERGY STAR



Food service is the most energy intensive commercial sector.



# Commercial Food Service



- Based on projected shipments, ENERGY STAR CFS equipment
  - Avoided 250,000 metric tons of GHG
  - Equivalent to emissions from 40,000 cars
- Outfitting an entire kitchen with a suite of ENERGY STAR qualified CFS equipment could save operators about 350 Mbtu/year annually, or the equivalent of approximately \$3,600.

# ENERGY STAR Status



- ~90 Manufacturer partners
- ENERGY STAR specs for 8 product categories
  - Hot Food Holding Cabinets
  - Steamers
  - Fryers
  - Ovens
  - Refrigerators/Freezers
  - Ice machines
  - Dishwashers
  - Griddles
- More than 1,300 CFS product models available
- 2009 Market Penetrations
  - Refrigerators/Freezers – 66% (v2 1/2010)
  - Hot Food Holding Cabinets – 78% (v2 2011)
  - Fryers – 7% (v2 2011)
  - Dishwashers – 82% (v2 2011)
  - Steam Cookers – 23%
  - Ice machines – 40%
  - Ovens – 28%
  - Griddles – 33%

# Commercial Food Service – Planned 2010 Revisions



Product Category / Product	Drivers	Milestones	Testing Protocol	Effective Date
CFS / Commercial Ice Makers	Add flake and nugget makers in addition to cubed	1/2010: Test Data available in AHRI cert database 8/2010: Launch revision 3/2011: Complete revision	AHRI procedure in development	Q4 2011
CFS / Commercial Fryers	Expand to larger equipment (>15")	11/2009: Begin revision 8-10/2010: Complete revision	ASTM procedure	Q4 2011
CFS / Hot Food Holding Cabinets	High market share as of 2008	11/2009: Launch revision 12/2009: Webinar 7/2010: Proposed final spec	ANSI/ASTM procedure, ENERGY STAR	Q3 2011
CFS / Commercial Dishwashers	High market share as of 2008, possibly include flight type	5/2010: Launch revision	ASTM procedure for total energy consumption	Q2 2011

# Recognizing Lessons & Key Themes into 2010 and Beyond



- Deliver on **MOU** commitments
- Ensure **relevance** in market
- Lead in **integrity** for voluntary programs
- Identify products ready for **standards**; reserve our role in recognizing leaders
- Continue support for **international** activities to remain active in community and tee up important projects for future.
- Leverage DOE partner for more meaningful US contributions

# New Agency Roles - EPA



- **EPA will...**
  - be the brand manager for the ENERGY STAR and higher tier program for products program including marketing, outreach, monitoring and verification, and setting the performance level(s)
  - maintain the master database of qualifying products and test results
  - develop the lists of new products to be added to the programs for consideration by the Governing Council

# New Agency Roles - DOE



- **DOE will...**
  - support EPA by increasing efforts in monitoring and verifying test procedure compliance and the development of Federal test procedures and metrics
  - provide technical analysis in support of specification setting



# Agency Roles and Responsibilities

## Test Procedures, Certification and Verification

- Test Procedures
  - DOE Covered Products (DOE leads via DOE Standards Program)
  - DOE Covered Products Under ENERGY STAR (DOE leads and is scheduling updates)
  - Developing/revising for ENERGY STAR products (DOE has lead)
- Certification
  - DOE Covered Products (DOE leads, currently allows self-certification; working on modifying)
  - All ENERGY STAR Products (**EPA** leads requiring independent laboratory or third party certification)
- Verification
  - DOE Covered Products (DOE leads via DOE Standards Program)
  - DOE Covered Products Under ENERGY STAR (DOE leads pilot testing program of 7 products, will expand program to all covered products)
  - All ENERGY STAR Products (**EPA** leads with third party verification program in addition to DOE continued verification of covered products)

# Why the change?



- Through over 18 years of shared effort, EPA and partners have built something of real value – the ENERGY STAR brand.
- Maintaining the value of this brand requires ensuring products labeled with the ENERGY STAR deliver on their promise to the consumer.

# Why now?



- Increased scrutiny of voluntary programs
  - Proliferation of green standards – national, international, media, retail
  - Concern over “greenwashing”
  - Inspector General Reports at EPA and DOE
  - General Accounting Office ENERGY STAR Investigation
- New MOU between EPA and DOE
  - “Verification of compliance with program requirements will be increased and efforts will be enhanced to identify and address product performance issues.”
  - “Verification of ENERGY STAR Qualifying Products will be enhanced..”

# Historic Approach Qualification and Testing



- EPA enters into Partnership Agreements with product manufacturers and issues program identify guidelines
- Manufacturing Partners submit test data to EPA to qualify their products within a designated timeframe; Lab accreditations required for certain product categories
- EPA reviews test data and adds products to list of qualified products
- EPA verifies energy performance through its compliance audit program

# New approach to qualification and testing



- EPA enters into Partnership Agreements with product manufacturers and issues program identify guidelines
- Prior to labeling, manufacturing Partners submit test data to EPA to qualify their products, eventually all test reports will come from accredited labs for all categories
- EPA reviews test data and qualified product information and then adds products to list of qualified products
- Manufacturers will work with verification program administrators to test ensure products continue to meet ENERGY STAR requirements

# CFS Equipment – Lab reports



- Commercial Dishwashers
- Commercial Fryers
- Commercial Griddles \*
- Commercial Hot Food Holding Cabinets
- Commercial Ice Machines
- Commercial Ovens \*
- Commercial Refrigerators/Freezers \*
- Commercial Steam Cookers

# Key Elements of Enhanced Testing



- Testing and reporting prior to qualification
  - Ensure that EPA has testing information on all products **prior** to labeling
  - Require test data from accredited labs that is representative of the product in the marketplace
- Continued testing after qualification
  - Verify that products continue to meet the ENERGY STAR requirements regardless of changes in the production process
  - Provide consumers with confidence that ENERGY STAR products are delivering the savings they expect

# ENERGY STAR Enhanced Testing and Verification Overview



## Testing Enhancement

Purpose:

Key Approaches:

## Qualification Testing

- *Ensure each product meets ENERGY STAR specification prior to being labeled with the ENERGY STAR*
- Require test data for each product from approved, accredited lab.
- Data may be provided to EPA through approved third-party certification system

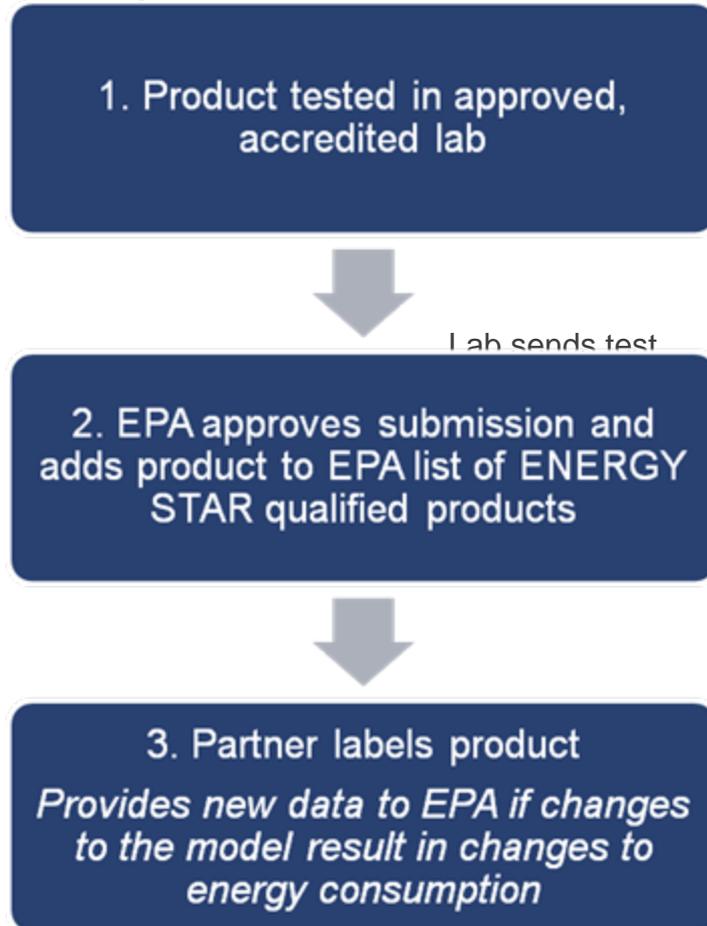
## Verification Testing

- *Ensure that products continue to meet ENERGY STAR requirements*
- Require ongoing verification testing as a condition of ENERGY STAR logo use
- Verification testing administered through third-party testing program
- DOE has initiated verification testing through Testing Pilot Program
- DOE to provide ongoing QA for verification testing

# EPA Qualification Testing



- EPA conducts qualification testing for all products



- EPA will modify partner commitments to reflect this new requirement.
- All testing conducted in accredited laboratories
  - Will consider ISO 17025 where appropriate
  - Other accreditations may be appropriate for some products
  - Third party certification programs can serve this function if they include initial testing in accredited labs as a criteria
  - Pre-approval and lab submittal requirements instituted across all product categories-effective March 30, 2010
  - Propose new qualification requirements June 1, 2010
  - New qualification requirements final July 15, 2010

# Market-Based Testing



*Scope: All ENERGY STAR Product Categories*

## Qualification Testing

Purpose: Ensure that testing is conducted as required by ENERGY STAR specification and that lab submits test results to EPA that are representative of products sold to customer.

1. Product tested in approved, accredited lab



Lab sends test information to EPA

2. EPA approves submission and adds product to EPA list of ENERGY STAR qualified products



3. Partner labels product

*Provides new data to EPA if changes to the model result in changes to energy consumption*

## Verification Testing

Purpose: Ensure that products continue to meet ENERGY STAR requirements.

1. Product selected for testing

*Third-party administrator facilitates product selection once or twice a year based on certified product (if certification program) or ES QP list (if EPA-selected administrator)*



2. Manufacturer pays third-party to administer independent, off-the-shelf or off-the-line witnessed testing



3. Third party administrator has products tested as required and shares results with EPA



4. If models deemed failure based on testing, EPA delists product  
*Requires corrective actions and analyzes root cause to prevent future problems*



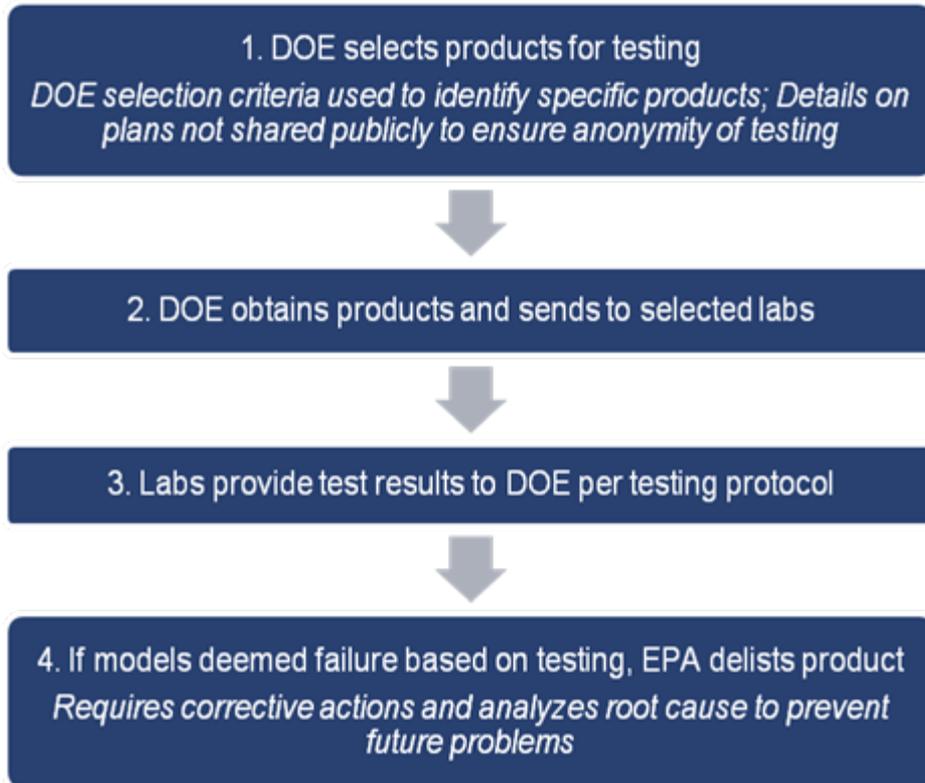
# DOE Verification Testing Program



*Scope: All ENERGY STAR Product Categories (prioritize DOE-covered products)*

## Process

Purpose: Ongoing government testing program to verify energy performance of product in the market against reported energy performance data.



## Roles

### DOE Role

- Select products
- Select labs
- Obtain products and send to labs
- Work with labs to obtain test results
- Refer test failures to EPA

### EPA Role

- Take enforcement action where products are deemed failures based on testing
- Work with labs to obtain test results
- Refer test failures to EPA

# Considerations for CFS Equipment

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- Leveraging existing testing programs such as CSA, ETL, UL and NSF
- Explore and encourage new certification programs such as ASTM
- Model after vent fan certification and verification testing requirements
- Obtaining samples for testing
- Challenge testing

# Timeline

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- **April 14** - New product qualification requirements
- **April 30** - Comments on enhanced testing and verification
- **May 3** - Draft requirements for Accreditation Bodies
- **May 17** - Draft criteria for lab requirements
- **June 1** - Draft requirements of for qualification and verification testing, including product-specific requirements

# Timeline – cont'd

- **July/August** - Finalize Requirements for the above draft documents
- **July thru December** - Recognize certification programs and accredited labs
- **August thru October** – Revise specifications to include new testing, qualification, and verification requirements
- **September/October** – All partners will need to sign new partnership commitments due to change in specs and partner commitments
- **December 2010** – All qualification test reports from EPA approved, accredited labs
- **2011** - Phase-in requirements for certification programs

# Draft requirements for AB



- Recognized accreditation body must:
  - Signatory with International Lab Accreditation Cooperation (ILAC) Mutual Recognition Agreement (MRA)
  - Meet ISO 17011
  - Comply with conditions in Lab Accreditation document
- May 3 - Draft requirements distributed
- May 14 - Comments due
- June 14 - Finalize requirements

# Draft Requirements for Labs



- Recognized labs must:
  - Maintain accreditation to ISO 17025 by EPA recognized AB
  - Make evidence and detail of its accreditation available to EPA
  - Labs agree to participate in inter-lab testing
- May 17 - Distributed draft requirements
- May 28 - Comments due
- June 14 - Finalize requirements

# Certification and verification testing

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- Draft requirements for recognized certification bodies for all product categories
  - Propose process to certify and verify product
  - Outline EPA program requirement changes to ensure products meet the new ENERGY STAR criteria and partnership commitments
- June 1 - Draft requirements due
- July 21 - Finalize requirements

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# Comments - Questions



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# Thank you

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<http://www.energystar.gov/testingandverification>